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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,841	09/09/2003	Johannes Baur	12406-118US1	2117

26161 7590 03/28/2006

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EXAMINER	
MULPURI, SAVITRI	
ART UNIT	**PAPER NUMBER**
2812	

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/657,841	BAUR ET AL.	
	Examiner	Art Unit	
	Savitri Mulpuri	2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/20/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the applicant's communication filed on 1/20/2006.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art in combination Udagawa (US 6,541,790) or NEC CORP (JP61110476) from IDS or Kawai (6,239, 033).

Admitted prior art, at para-0002-0014, teaches a radiation-emitting semiconductor component comprising: epitaxial multilayer structure including active layer for generating radiation in multilayer structure of GaN, electrical contacts connected to said active layer, radiation transmissive window of SiC with first main surface and adjoining multilayer structure and second main surface opposite said first main surface and second main surface (see fig. 9).

With respect to claims 12,16-18, 20-21 Admitted prior art teaches the window (substrate) has refractive index grater than the refractive index of multilayer structure (see para 0004), wherein multilayer structure is grown by epitaxy on window (substrate) or by bonding (Krames). Admitted prior art teaches the void or trench recess is formed by either sawing or etching (see Kramescol.7, lines 40-45).

Admitted prior art teaches cutting the substrate sawing technique by either sawing or etching (see Kramescol.7, lines 40-45). Admitted prior art teaches sawing the substrate by saw blade "80" having trapezoidal cross section (see US6, 229,160 to Krames fi.2, f ig.7, fig. 10 and col. 4- col.5 for detailed information, which is discloses as admitted prior art Admitted prior art, in Krames, fig. 7 the truncated cone shaped cavity is interpreted as void, which is recited trench recess in the window (substrate). Since the instant claims are not limited to void as trench recess formed is not limited to only within the window (substrate) as shown in fig. 1A in instant invention).

Admitted prior art does not disclose tranmissive window has having at least one void selected from the group consisting of a trench recess and a pit recess formed therein for increasing coupling out of radiation from said window, wherein window have side surface and having an angle in the range of 20-70 degrees, with partial regions perpendicular and orthogonal to first and second main surfaces respectively; and said window has an enveloping basic shape selected from the group consisting of parallelized or cuboid shapes; void has at least one planar side surface enclosing an angle different from 90 degrees with second main surface, wherein void is a trench recess formed with triangular or trapezoidal cross section tapering towards the first surface.

Udagawa teaches forming recess on the backside of the silicon substrate "13,109", wherein recess are in different shapes elliptical or circular or square, rectangle (see fig.1,2 5 and col.5, lines 1-65). NEC COP(JP 61110476) also teaches forming recess in the backside of GaAs substrate to obtain high emitting light out put(se

abstract) It would have been obvious to one of ordinary skill in the art to form vias or recess in the substrate in the invention of the admitted prior art the light emitted from the light emitting part is less absorbed by silicon substrate and therefore the area capable of transmitting light toward the outside is increased, which contributes the enhancement light intensity(see col. 5, lines 1-2)

With respect to claims Kawai teaches forming light emitting devices of GaN on SiC substrate. Kawai teaches forming via in the substrates in different shapes (see fig. 12-14) by laser ablation or etching (see col.5, lines 39-46). It would have been obvious to one of ordinary skill in the art to form via in SiC substrate in the invention of admitted prior art because art recognized equivalence of forming vias by either sawing or laser ablation or etching . Note that Kawai is only relied to support the void formation in the substrate can be done by laser ablation or etching, but not whether the light emitting device is edge emitting or surface emitting device.

Applicant's arguments filed 1/20/2006 have been fully considered but with respect to Botez and Plais references the arguments are persuasive. However, it was noticed that applicant did not argue over the applied reference by Kawai in the response filed on 1/20/2006. Since there were no arguments were presented by applicant, it was understood that applicant agreed with Kawai. New references were applied to show that how well known to form recess in the backside of the transparent substrates silicon (Si)or gallium arsenide (GaAs) to increase the light emission.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

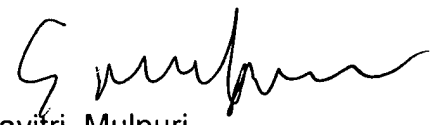
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Savitri Mulpuri whose telephone number is 571-272-1677. The examiner can normally be reached on Mon-Fri from 8 a.m. to 4.30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt, can be reached on 571-272-1677. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Savitri Mulpuri
Primary Examiner
Art Unit 2812